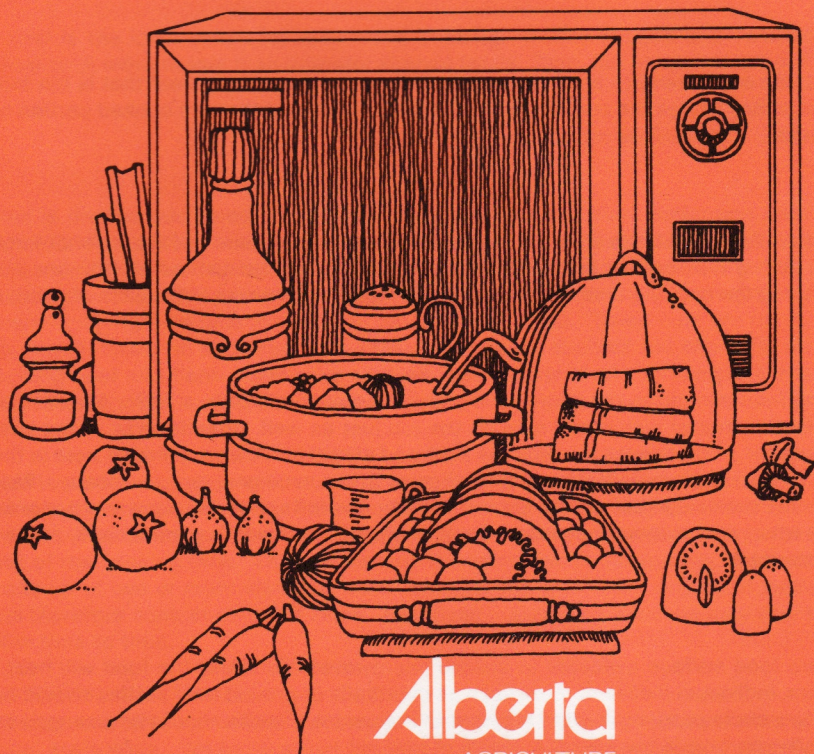


# Beef in the Microwave



**Alberta**  
AGRICULTURE

There are many microwave cookbooks available but few go into detail on "how to microwave" the various cuts of beef. This booklet explains the basic microwave methods for tender and less tender cuts and provides basic microwaving times for these cuts.

These recipes include many typical family favorites, such as, Meat Loaf Ring, Swiss Steak and Roast Beef. To add a little flare, a few gourmet dishes are included.

## UNDERSTANDING MICROWAVE COOKING

Microwave cooking is unique because all the heat is created inside the food. Microwaves penetrate the surface of food to a depth of about 2 cm and then the heat is gradually conducted to the centre. Because microwaves are absorbed in a random pattern, some parts of a food item cook faster than others.

Special microwaving techniques are used to promote *fast* and *even* cooking. Some of these techniques are similar to conventional cooking, but because microwaves produce heat very quickly they are extremely important.

### STIRRING

The outside edges tend to cook faster than the centre, so stirring beef that is cut into strips or cubes brings the cooked portion to the centre, and the less cooked portion to the outside. The result is more even cooking.

### ROTATING

Foods that have a definite shape, such as meat loaf, casseroles and roasts should be rotated during the cooking time. This is done by rotating the dish a half turn once or twice during the cooking time, or by turning the food item over, as in the case of a roast.

### COVERING

Covering food minimizes the microwaving time. If you do not have a lid for a particular dish, plastic wrap or wax paper may do the job just as well. **Plastic wrap** is the best substitute for a lid because it keeps the heat and steam in. Always pierce a hole in the plastic or turn back the plastic on one edge to allow excess steam to escape. **Wax paper** holds the heat in but not the steam. It also prevents spattering. Use wax paper as a cover when steam is not necessary for tenderizing the meat, e.g. meatballs, patties and casseroles.

### ARRANGEMENT OF FOOD

The more food surface available to absorb microwaves the faster the food will heat. Therefore, individual pieces of meat such as meatballs or ground beef patties should be placed in a circle or triangle with no pieces in the centre. Steaks should be arranged so the smaller portion is towards the centre.

### STANDING TIME

Food continues to cook after it is taken out of the oven. Standing time refers to the time it takes, (after the microwave time is complete), to allow the internal heat to finish cooking the food. The amount of standing time varies with the size and density of the cut.

## TIMELY CONSIDERATIONS

There is a rule of thumb for beef that should never be ignored; **always** set the timer to **undercook** beef. It's easy to reset your microwave oven for additional time, but you can **never** tenderize over-cooked beef. The amount of time it takes to microwave beef depends on several variables. Always consider these variables when selecting the cooking time.

### POWER LEVELS

**Full Power** cooks food in the minimum amount of time and can be used for microwaving ground beef, beef sausages or weiners, and casseroles. It is also used for re-heating leftover beef. **70% power** is used for most tender cuts, **50% power** for medium tender cuts and those which have been tenderized by marinating. **30% power** is used for less tender cuts when slow heating is necessary to tenderize the beef.

### QUANTITY OF FOOD

As the quantity increases so does the microwave time. But remember, when the quantity doubles, the time is slightly LESS than double.

### COMPOSITION OF FOOD

The more dense a food item, the longer it takes to cook, reheat or defrost. Beef in gravy or sauce takes longer to heat than beef without sauce or gravy. Recipes high in fat or sugar cook more quickly.

### SIZE AND SHAPE OF FOOD

Round is the ideal shape for microwave cooking. Evenly shaped and compact food items cook more evenly than irregular shaped foods. Thin, flat shapes also cook quickly.

## BEEFACTS ON MICROWAVING

### COOKING METHODS VARY WITH DIFFERENT CUTS

Beef is divided into three groups for cooking: tender, medium tender and less tender cuts. The tender cuts such as rib roasts, rib, wing, T-bone, porterhouse or sirloin steaks and ground beef are cooked by **dry heat** methods. No liquid is required and only a loose covering such as wax paper should be used. The medium tender cuts require a slightly longer cooking time plus moisture to tenderize the meat. These cuts are rump, sirloin tip, round, cross rib and blade. The less tender cuts such as the short rib, shoulder, stewing beef and flank steak need an even lower power level plus moisture in order to allow time for the beef to become tenderized.

### FAT AND LEAN COOK AT DIFFERENT RATES

Beef is made up of varying amounts of lean, fat and bone, all of which cook at different rates in the microwave oven. Fat absorbs microwave energy very quickly; therefore the fat side of a roast should be kept away from the source of microwave energy for at least part of the cooking time. The area around the bone also cooks quickly. Some cuts are made up of two or more muscles, each of which has a different degree of tenderness, and therefore cook at different rates. For these reasons your results may vary slightly from time to time.

### WHAT ABOUT STEAKS?

Whether or not you like steaks cooked in the microwave oven is really a matter of personal preference. We believe that broiling or frying a steak produces a slightly better flavor.

The rib, wing, T-bone, porterhouse and sirloin steaks are naturally tender and cook quickly in the microwave oven. However, they tend to cook unevenly due to the variations of bone, fat and lean in each steak. The searing or grilling which gives the steak flavor is also difficult to achieve in microwaving. Therefore, we recommend using a browning dish which produces an acceptable color and flavor.

## BROWNING

Beef will brown with microwave cooking if cooked longer than 10 to 12 min, but not to the same extent as conventional cooking. Roasts brown to a very acceptable color.

**Browning agents** can be used to add more color and flavor to beef recipes. Some examples are: brown bouquet sauce, concentrated beef bouillon diluted with an equal amount of water, powdered brown gravy mix, barbecue sauce, chili sauce or teriyaki sauce.

## DEGREE OF DONENESS

For maximum tenderness, the tender cuts should be cooked to the rare or medium stage, except ground beef, which can be well done. The medium and less tender cuts are cooked to medium or well done using the moist heat method.

## STANDING TIME

Standing time varies from zero to 15 or 20 min, depending on the amount of beef and the tenderness of the cut being microwaved. Individual items such as hors d'oeuvres, meatballs and patties need very little standing time. The power level used in microwaving also determines the standing time. When using a low power level the standing time is shorter because of a lower concentration of heat in the food.

## TEMPERATURE

It is **not** recommended to let beef come to room temperature before microwaving. For this reason, all microwave times in this booklet are for beef at refrigerated temperatures.

## SEASONINGS

Do **not** salt beef before microwaving because it dehydrates the surface of the meat during cooking. All other seasonings can be added before cooking and the salt added at the end.

## MARINATING

Marinating tenderizes beef and adds flavor. The best cuts to marinate are blade, cross rib, round or flank steak and stewing beef.

To marinate, pierce all meat surfaces with a fork, cover with marinade and refrigerate overnight (18 to 24 h). Turn meat over occasionally. If you prefer a mild marinade flavor, use large pieces of beef because smaller pieces absorb more marinade flavor. Before cooking, drain off marinade, add 125 mL water and cover. Marinade can be used instead of water. Use **50% Power** level instead of **30% Power** usually used for less tender cuts and microwave 45 to 60 min/kg.

# ADAPTING CONVENTIONAL RECIPES

- A general guide for microwaving time is 25% to 33% of the conventional cooking time. For example, a casserole which takes one hour to cook the conventional way will take 15 or 20 min the microwave way. *Remember* it is always best to *undercook* a recipe and then add an extra minute or two to finish it off. Once beef is overcooked you can't reverse the cooking process.
- Reduce liquid in a recipe by 25% since there isn't sufficient time for it to evaporate during cooking. e.g. 250 mL is reduced to 200 mL.
- Add more thickening such as flour or cornstarch to sauces and gravies if you do not reduce the liquid.
- Reduce seasonings slightly in a recipe where ingredients don't have time to simmer.
- Salt meat *after* cooking because it dehydrates the surface of the meat and toughens the meat tissues.
- If one ingredient takes longer to cook than the others, pre-cook it in the microwave first. Onion, celery and green pepper are examples.
- Use less butter, margarine or oil. In fact, you can omit it if you like.
- When a recipe calls for browning the beef first, add a little brown bouquet sauce or concentrated beef bouillon for flavor and omit the browning step.

# ADAPTING THESE RECIPES TO YOUR MICROWAVE OVEN

All microwave ovens vary in the amount of time they take to cook food. This is because the wattage output rating of each brand is different. If you do not know the wattage of your oven, look in the operating instructions or on the name plate located in one of three places: on the back of the oven, on the frame of the door, or on the edge of the door.

## SELECTING THE TIME

These recipes have been tested in several countertop microwave ovens, ranging in wattage from 600 to 700 watts. For this reason, each recipe gives you a range of cooking times, such as, 9 to 12 min. To determine which times are best for your oven, start with the minimum time given in the recipe and add time if necessary. Record the time your oven took to complete each cooking step, together with your comments, in the time chart that follows each recipe.

Here is a sample of what your time chart may look like after preparing Swiss Steak (p.11).

STEP*	YOUR TIME**	COMMENTS
3	6.5 min	<i>tried 5 min; not enough</i>
4	55 min	<i>tender</i>

\* Only the steps where cooking is required are listed on the chart.

\*\* If your microwave oven has a wattage output rating of less than 600 watts, you will find that some increase in the suggested cooking times may be necessary.

## SELECTING THE POWER LEVEL

Some microwave ovens have only one power level called "COOK" which is referred to as FULL POWER in these recipes. Many ovens have a second setting called "DEFROST"; it is usually 30% to 50% of full power. The number of power levels and the names given them, vary with each model. **These recipes are microwaved using FULL POWER, 70% POWER, 50% POWER, or 30% POWER.** If your oven does not have four power levels, substitute 50% power for 70% power. In order to prepare these recipes you will need to know where these power levels are on your oven. This is easy to do by following this simple water test.

1. Take a 250 mL glass measure which is at room temperature and fill it with exactly 250 mL of lukewarm water (i.e. body temperature—neither hot nor cold).
2. Place the cup in the oven, set the timer for 10 min, select the first power setting and turn oven on.
3. Watch how long it takes for the water to "just" start bubbling.
4. When the time for the water test matches one of the suggested timings listed in the chart below, write the name or number of the power setting in the space provided.

	Time For Water Test	Time Remaining On Timer	Name or Number of Your Power Level*
FULL POWER	2—2.5 min	7.5—8 min	
50% POWER	4.5—5.5 min	4.5—5.5 min	
30% POWER	8.5—10 min	0—1.5 min	

\* Power levels on some ovens are indicated by a number sequence of 1 to 9. Each number refers to a percentage of full power, e.g. #5 is equal to 50% POWER.

## DEFROSTING

- For the most satisfactory results, always defrost beef before cooking. Ground beef is the **only** exception.
- The defrost times are based on using 30% POWER level (defrost setting). If your oven has a *variable defrost* control use the setting that gives 30% POWER.
- Compact evenly shaped roasts will take longer than flat or irregular shaped roasts.

### DEFROSTING GUIDE FOR ROASTS

Use 30% POWER LEVEL.

MICROWAVE TIME: 20 to 25 min/kg.

1. Place roast wrapped in original plastic or paper package in the oven.
2. Microwave on 30% POWER for half the defrosting time. Turn at least once.
3. Remove wrapping, turn roast over and place in a glass dish on a trivet. Check roast for warm spots and shield with small pieces of foil where necessary. Irregular shaped roasts such as standing rib require special attention.
4. Microwave on 30% POWER for last half of defrosting time. Turn once. A roast looks moist but feels cold when thawed.
5. Test meat by inserting a skewer or a sharp knife into the centre of roast. Let stand in refrigerator about 30 min to equalize temperature of the meat before cooking.

AMOUNT	TYPE OF ROAST	YOUR TIME	COMMENTS

### DEFROSTING GUIDE FOR STEAKS, CUBES AND GROUND BEEF PATTIES

USE 30% POWER LEVEL.

MICROWAVE TIME: 10 to 20 min/kg.

1. Place package of beef wrapped in original plastic or paper in the oven.
2. Microwave on 30% POWER half the total **minimum** defrosting time.
3. Open package—turn beef over and continue defrosting for last half of the **minimum** time.
4. Separate and spread out pieces as soon as possible. Refrigerate to finish defrosting or microwave 1 to 2 min more.
5. Let stand 5 to 10 min. At the end of defrosting time beef will be thawed but some portions will be colder than others. Standing time allows the temperature of the meat to equalize before cooking. If beef is cooked directly after defrosting it will not be cooked to the same degree of doneness throughout.

AMOUNT	YOUR TIME	COMMENTS

**DEFROSTING GUIDE FOR GROUND BEEF**

- **TYPES OF GROUND BEEF:** regular ground beef will thaw faster than medium or lean types because of higher fat content.
- Defrosted ground beef should be cool, soft to the touch and glossy, with lean red meat and white fat. If the fat turns transparent it's beginning to cook.

USE 30% POWER LEVEL and microwave for the times listed in the chart.

1 kg GROUND BEEF	
MICROWAVE TIME	YOUR TIME
1. 6 min, turn over	
2. 6 min, scrape*	
3. 4 min, scrape*	
4. 2 to 3 min, if necessary	

\* Scrape off thawed meat and set aside. The remaining piece can be broken into chunks.

- **TO DEFROST SMALLER QUANTITIES:** decrease microwave time 2 min in each step in the time chart.
- **TO DEFROST LARGER QUANTITIES:** follow the instructions in the time chart and continue microwaving on 30% POWER at 4 min intervals, scraping each time, until beef is completely thawed.

**ONE-STEP DEFROSTING AND COOKING OF GROUND BEEF**

Ground beef can be defrosted and cooked in one continuous sequence when the recipe calls for cooking meat before adding other ingredients.

1. Place ground beef in casserole or bowl to be used in preparing the recipe.
2. For 500 g of ground beef, microwave, covered, on FULL POWER for 4 min.
3. Using two forks, break up the chunk of ground beef, moving cooked portions to the centre and uncooked portions to the edge of the dish.
4. Microwave, covered, on FULL POWER for 4 to 5 min longer or until just a slight bit of pink remains. Stir twice during cooking time.
5. Let stand 2 min or until pink disappears.

STEP	YOUR TIME	COMMENTS
2		
3		

**MICRO MEMO:**

- Small cubes and strips of beef will defrost in a shorter time than steaks.
- A LOW CALORIE TIP:**
- Cook ground beef in a plastic colander placed in a glass bowl so all the fat drains into the bowl and can be easily discarded.

## ROASTING

### MICRO MEMOS ON ROASTING

- The ideal roast size is 1.5 to 2 kg, boned and rolled, i.e. compact and evenly shaped.
- Irregular shaped roasts will cook more quickly at the small end. Therefore, it may be necessary to shield the small end with foil.
- A long thin roast cooks faster than short thicker ones.
- A boned and rolled rib roast with a thin layer of fat around it cooks more evenly than a rump roast with fat only on one or two sides.
- A meat thermometer is the most accurate way to determine doneness. Microwave meat thermometers and food probes are especially designed for being used while the roast is cooking. A regular meat thermometer can be used to test doneness during standing time or part way through the cooking, but it must not be left in the meat during microwaving.

### ROLLED OR STANDING RIB ROAST

*Since this roast is one of the most tender cuts, it will surely be a family treat.*

1. If desired, brush the surface of the meat with brown bouquet sauce diluted with an equal amount of water. However, the roast will brown without sauce.
2. In a glass baking dish, place roast fat side down on a trivet or inverted saucer to keep the meat out of its juices. Season with pepper, garlic, etc. (no salt).
3. Microwave, covered with wax paper on 70% POWER for the time ranges suggested in the chart below. Turn roast over part way through cooking time.\*
4. Pour off meat juices as they collect in the bottom of the dish to prevent a steamed effect. The excess liquid also absorbs some microwave energy and increases the cooking time. Save juices for gravy.
5. Test doneness with meat thermometer. Insert probe so tip rests in centre of roast. Internal temperature of roast should match the degree of doneness in the chart below. As soon as microwave time is completed or desired temperature has been reached, wrap roast in aluminum foil.
6. Let roast stand 10 to 15 min. During the standing time the roast will finish cooking and the internal temperature will increase 8 - 10°C.

\*Turn small roasts at least once during cooking and large roasts 3 to 4 times.

USE 70% POWER LEVEL.

Doneness	Internal Temperature	Times Min/kg.	Comments
Rare	50 °C	25-30	
Medium	60 °C	30-35	
Well Done	70 °C	35-40	

Large roasts, 2 to 3 kg, tend to be more well done in the first few slices from the top than in the centre because these slices are closer to the source of energy.

WEIGHT OF ROAST	YOUR TIME AND INTERNAL TEMPERATURE

## RUMP ROAST AND GRAVY

*Wrapping the roast in bacon prevents it from drying out and gives the gravy excellent flavor.*

2 kg rump roast

125 mL water

6 slices bacon

1. Wrap roast with bacon using toothpicks to secure it.
2. Place roast in glass casserole. Add water.
3. Microwave, covered with lid or plastic wrap, on 70% POWER for 25 to 35 min/kg or 50% POWER for 40 to 45 min/kg. Turn roast two or three times.
4. Let stand 15 to 20 min. Roast will be cooked to well-done stage.

STEP	YOUR TIME	COMMENTS
3		

### To prepare gravy:

Drain the fat from the top of the pan drippings. Blend 25 mL flour into 125 mL water until smooth. Stir into the drippings 1 mL brown bouquet sauce or bacon from roast, cut into small pieces, may be added. Microwave, uncovered, on FULL POWER, for 3 to 4 min until it bubbles and cooks. Stir once or twice during cooking.

STEP	YOUR TIME	COMMENTS

## QUICK BEEF STEW

*A hearty beef stew that can be made in half an hour with leftover roast beef.*

750 mL diced cooked roast beef

250 mL cold water

175 mL chopped onion

50 mL flour

250 mL sliced carrots

6 mL salt

250 mL diced potatoes

3 beef bouillon cubes dissolved in

125 mL celery

500 mL boiling water

1. Place meat and vegetables in a 3L casserole.
2. Blend flour, salt, and cold water together, stirring until smooth. Add bouillon and flour mixture to meat and vegetables.
3. Microwave, covered, on FULL POWER for 25 to 30 min or until vegetables are tender crisp. Stir about three times. 4 servings.

STEP	YOUR TIME	COMMENTS
3		

## HOT ROAST BEEF SANDWICHES

*A quick and easy way to serve roast beef and always a family favorite.*

4 slices bread or toast

375 ml gravy

8 slices roast beef

1. Place leftover gravy in a 500 mL measure or small glass bowl.
2. Microwave, uncovered, on FULL POWER for 3 to 4 min or until hot. Set aside.
3. Place two slices of meat on each slice of bread.
4. Line bottom of the oven shelf with paper towel and arrange open face sandwiches on it.
5. Microwave, covered with paper towel or paper napkin, on FULL POWER for 3 to 4 min or until meat is hot.
6. Place sandwiches on plates. Pour hot gravy over meat and serve immediately. 4 servings.

STEP	YOUR TIME	COMMENTS
2		
5		

## MICROWAVING LESS TENDER CUTS

**POWER LEVEL:** All less tender cuts are microwaved on 30% POWER LEVEL for maximum tenderness.

**MICROWAVE TIME:** Steaks 55 to 65 min/kg.

Roasts 45 to 55 min/kg.

The time for roasts is slightly shorter than for steaks because a larger piece of meat retains the heat better.

1. Browning the meat helps to develop the flavor of beef but the conventional method of frying is not necessary for less tender cuts. Instead, brush all sides of meat with a mixture of liquid browning sauce diluted in an equal amount of water.
2. Place roast or steak in a glass baking dish.
3. Add 125 mL water plus seasonings.
4. Cover with a lid or plastic wrap. Vent plastic to allow excess steam to escape.
5. Microwave on FULL POWER until liquid begins to bubble, approximately 6 to 7 min.
6. Change power level: microwave on 30% POWER for half the total **minimum** cooking time. For cubes and strips stir once or twice during cooking and for roasts turn over half way through the cooking time. If roast is 8 cm higher than the liquid, use a piece of foil to cover top of roast to prevent overcooking during last half of cooking time.
7. Continue microwaving for last half of the **minimum** time or until tender.

STEP	YOUR TIME	COMMENTS
5		
6		
7		

### BASIC BEEF STEW

*Fork-tender beef and tender crisp vegetables.*

*Feel free to add more seasoning to suit your family's taste.*

- |                                    |                                     |
|------------------------------------|-------------------------------------|
| 1 kg stewing beef                  | 1 mL garlic salt                    |
| 175 mL chopped onion               | 1 bay leaf                          |
| 3 beef bouillon cubes dissolved in | 3 medium carrots, sliced            |
| 625 mL boiling water               | 2 medium potatoes, cut into eighths |
| 5 mL salt                          | 125 mL cold water                   |
| 3 whole peppercorns                | 50 mL flour                         |
| OR 1 mL ground pepper              |                                     |

1. Place meat and onion in a 3L casserole. Add bouillon, salt, pepper, garlic and bay leaf to casserole.
2. Microwave, covered, on FULL POWER for 6 to 8 min, or until liquid bubbles.
3. Change power level. Microwave on 30% POWER for 40 to 50 min, stirring at least once.
4. Stir in potatoes and carrots. Microwave, covered, on FULL POWER, 4 to 6 min, or until mixture bubbles.
5. Change power level. Microwave on 30% POWER for 40 to 50 min, or until vegetables are tender.
6. Blend cold water and flour, stirring until smooth. Add this to stew and mix well.
7. Microwave, covered, on FULL POWER, 4 to 6 min, or until thickened, stirring 3 times.
8. Remove peppercorns, if used, and bay leaf. 8 servings

STEP	YOUR TIME	COMMENTS
2		
3		
5		
6		

## BEEF STROGANOFF

*A tasty recipe that can be made with round steak or if you are in a hurry use sirloin steak.*

750 g round or sirloin steak, cut in 1 cm x 7 cm strips	2 mL dry mustard 25 mL flour
125 mL chopped onion	1 beef bouillon cube dissolved in 250 mL boiling water
1 can (284 mL) mushrooms, drained	125 to 250 mL sour cream
50 mL ketchup	
4 mL salt	

1. Place strips of meat, onion and mushrooms in a 1.5L casserole.
2. Combine ketchup, salt, dry mustard and flour, stirring until smooth. Add bouillon to the sauce, and pour over meat.

### Method for Sirloin Steak;

3. Microwave, covered, on FULL POWER for 10 to 12 min, or until meat is cooked. Stir 2 to 3 times.
4. Add sour cream and let stand 10 min before serving.

STEP	YOUR TIME	COMMENTS
3		

### Method for Round Steak:

3. (a) Microwave, covered, on FULL POWER for 5 min until liquid begins to bubble.  
(b) Change power level: Microwave, covered, on 30% POWER for 30 to 35 min or until beef is tender. Stir at least twice.
4. (a) Add sour cream and let stand 5 min before serving. Serves 6.

NOTE: standing time is shorter when meat is microwaved at 30% POWER.

STEP	YOUR TIME	COMMENTS
3a		
3b		

## SWISS STEAK

*A flavorful way to prepare round steak.*

*The tenderness of the meat will be a pleasant surprise.*

750 g round or blade steak, cut in 6 to 8 thin slices	4 mL salt
45 mL flour	5 mL paprika
125 mL chopped onion	2 mL basil
125 mL chopped celery	
1 can (398 mL) tomatoes	

1. Sprinkle steak with flour.
2. Layer meat, onions and celery in a 2 L casserole or glass baking dish. Using a fork, break up tomatoes in the can, add seasonings to tomatoes, stir, and pour over the meat.
3. Microwave, covered, 5 to 7 min on FULL POWER or until liquid begins to boil.
4. Change power level: microwave on 30% POWER for 50 to 60 min, turning meat over after 30 min. 6 servings.

STEP	YOUR TIME	COMMENTS
3		
4		

## ROULADEN

*Tasty beef rolls in a thick gravy. A German dish with a gourmet touch.*

6 slices bacon, cut into 2.5 cm pieces	2 mL pepper
1 can (284 mL) mushrooms, drained	250 mL cold water
750 g round steak (1 cm thick), cut into 6 pieces	25 mL flour
50 mL flour	2 beef bouillon cubes, dissolved in 250 mL boiling water
10 mL salt	50 mL chopped onion

1. Place bacon on a plate and microwave, covered with paper towel, on FULL POWER for 4.5 to 5.5 min. Drain.
  2. Combine mushrooms and bacon. Place an equal amount of bacon/mushroom mixture on each piece of meat. Roll up jelly-roll fashion tucking ends in. Tie with string.
  3. Combine 50 mL flour with salt and pepper. Dip beef rolls in flour mixture to coat all surfaces evenly. Discard excess flour. Place meat in a single layer in a 2.5 L casserole.
  4. Combine 25 mL flour and cold water, stirring until smooth. Stir in bouillon and onion and pour over meat.
  5. Microwave, covered, on FULL POWER for 5 to 7 min.
  6. Change power level: microwave on 50% POWER for 25 to 30 min, turning meat and stirring after 15 min. (Meat will be pinkish in the centre due to the color of the bacon).
- 6 servings

STEP	YOUR TIME	COMMENTS
1		
5		
6		

## LIVER CREOLE

*A new way to serve liver that will please the whole family.*

500 g beef liver, cut in 5 cm x 1 cm strips	50 mL chopped green pepper
15 mL brown bouquet sauce	2 mL salt
125 mL chopped onion	2 mL Worcestershire sauce
25 mL flour	1 mL basil
1 can (398 mL) tomatoes	0.5 mL garlic powder (optional)

1. Place liver in 1.5 L casserole. Toss with brown bouquet sauce until well coated.
2. Microwave, covered, on FULL POWER for 3.5 to 4.5 min or until pinkness just disappears. Stir 2 or 3 times during cooking. Place liver in a bowl and set aside.
3. Place onion in casserole. Microwave, covered, on FULL POWER for 2 to 3 min or until just tender, stirring once.
4. Add flour to onion; stir. Gradually add tomatoes, stirring until smooth. Stir in green pepper, salt, Worcestershire sauce, basil and garlic powder.
5. Microwave, covered, on FULL POWER for 4 to 5 min or until sauce thickens and boils, stirring twice during cooking. Stir in cooked liver.
6. Microwave, covered, on 50% POWER for 5 to 6 min or until well heated, stirring once or twice.
7. Let stand, covered, for 5 min. Serve hot with mashed potatoes or rice. 4 servings.

STEP	YOUR TIME	COMMENTS
2		
3		
5		
6		

## MICROWAVING GROUND BEEF

There are three types of ground beef: regular, medium and lean. Regular ground beef takes less time to cook than lean because it has a higher fat content. These recipes were tested using regular ground beef. If you prefer to use medium or lean ground beef the cooking time will be slightly longer.

### GROUND BEEF PATTIES

USE FULL POWER.

MICROWAVE TIME: 13 to 17 min/kg.

1. Shape seasoned ground beef into 4 or 6 patties per 500 g, 8 cm in diameter. Arrange patties in a circle on a glass baking dish.
2. Microwave, covered\* with wax paper, on FULL POWER, for half the total **minimum** cooking time. Rotate dish one-half turn or turn patties over.
3. Microwave the last half of the **minimum** time. At the end of cooking time there will be just a slight tinge of pink in the centre.
4. Let stand 5 min. Patties will brown a little after standing.

\*Covering is optional. Wax paper will prevent spatter and give a juicy patty. Paper towel will absorb some fat and moisture. Uncovered will be slightly crisper and takes slightly longer.

NUMBER OF PATTIES	YOUR TIME		COMMENTS
	STEP 2	STEP 3	

#### MICRO MEMOS:

- TO COOK INDIVIDUAL PATTIES: Microwave on FULL POWER for 1 to 3 min per patty. Adjust cooking time to the size of patty — smaller ones require minimum time.
- Patties with bread or cracker crumbs, oatmeal or crushed cornflakes require slightly less cooking time.

### BEEF AND VEGETABLE PEPPERS

*A colorful main dish, served with a salad for that finishing touch.*

6 medium green peppers	1 mL pepper
500 g regular ground beef	0.5 mL garlic powder
250 mL cooked rice OR kernel corn	1 can (284 mL) tomato soup
25 mL instant minced onion	125 mL water
7 mL salt	175 mL grated cheese

1. Cut tops off green peppers. Remove seeds and membrane.
2. Combine beef, rice (or corn), onion, salt, pepper, and garlic powder. Add one-half of the can of soup and mix well. Spoon mixture into peppers.
3. Arrange peppers in a circle in a 1 L glass pie plate or similar size casserole.
4. Stir water into remaining one-half can of soup. Spoon 25 mL soup over each green pepper. Pour remaining soup into bottom of casserole.
5. Microwave, covered, on FULL POWER for 16 to 20 min, rotating the dish 3 to 4 times during the cooking time.
6. Top each green pepper with some grated cheese.
7. Microwave, uncovered, on FULL POWER for 35 to 45 sec or until cheese melts.
8. Let stand 2 min. 6 servings.

STEP	YOUR TIME	COMMENTS
5		
7		

## MEAT LOAF RING

*Everyone has a meat loaf recipe but this one is our favorite in a new shape!*

750 g regular ground beef  
75 mL finely chopped onion  
250 mL soft bread crumbs  
1 egg  
125 mL milk

5 mL salt  
1 mL pepper  
10 mL Worcestershire sauce  
5 mL brown bouquet sauce  
5 mL water

1. Place ground beef, onion, bread crumbs, egg, milk, salt, pepper and Worcestershire sauce in large bowl. Mix well.
2. Place beef mixture in 1 L glass pie plate or round glass cake dish. Shape into a ring forming a hole in the centre approximately 8 cm in diameter.
3. In a small dish, mix together brown bouquet sauce and water. Brush over entire surface of meat ring.
4. Microwave, covered with paper towel, on FULL POWER, for 14 to 17 min or until just a very slight tinge of pink remains in the centre of the meat. Rotate dish twice during cooking time.
5. Drain off fat and let meat ring stand, uncovered, for 5 to 10 mins to finish cooking and set the ingredients so it is easy to slice. 6 servings.

STEP	YOUR TIME	COMMENTS
4		

### MICRO MEMOS:

- To add color and variety brush top with a sauce such as ketchup, chili or barbecue or sprinkle with grated cheese.
- For best results, use round casseroles or ring dishes as square or rectangular dishes tend to overcook the corner, before the centre is done.

## MEATBALL MAGIC

*For a fast meal, why not keep a supply of cooked meatballs on hand in the freezer? Simply defrost the meatballs, prepare one of the tasty sauces below and heat them together — a lifesaver on busy days or when extra people arrive unexpectedly.*

### BASIC MEATBALLS

500 g regular ground beef  
1 egg  
125 mL fine dry bread crumbs

50 mL finely chopped onion  
5 mL salt  
0.5 mL pepper

1. Combine all ingredients in large mixing bowl.
2. Shape into 18 meatballs, each having a diameter of approximately 3 cm. Arrange in two circles, one inside the other, on a 1 L glass pie plate. Do not place a meatball in the centre of the pie plate.
3. Microwave, covered with waxed paper, on FULL POWER for 7 to 8 min or until just a very slight tinge of pink remains in the centre. Pie plate should be rotated half a turn half-way through the cooking time.
4. Let stand 3 to 5 min. 4 servings.

STEP	YOUR TIME	COMMENTS
3		

### MICRO MEMOS:

- If you increase the size of the meatballs, you must increase the time; if you decrease the size then decrease the time slightly.
- Meatballs brown after a short standing time.

### DEFROSTING MEATBALLS

To defrost 1 recipe of **Basic Meatballs** (i.e. 18 meatballs):

1. Arrange meatballs in two circles, one inside the other, on a 1 L glass pie plate.
2. Microwave, covered with wax paper, on 30% POWER (DEFROST) for 6 to 7 min or until thawed.
3. Microwave on FULL POWER for 2 to 3 min or until meatballs are warm.

STEP	YOUR TIME	COMMENTS
2		
3		

### HAWAIIAN MEATBALLS

1 recipe Basic Meatballs

2 mL ground ginger (optional)

1 can (398 mL) pineapple chunks

15 mL soya sauce

50 mL brown sugar

45 mL vinegar

25 mL cornstarch

1 green pepper, seeded and sliced

1. Prepare meatballs according to basic recipe, or thaw frozen cooked meatballs as directed.
2. Drain pineapple chunks, reserving juice. Add enough water to juice to make 300 mL liquid.
3. In a 2 L casserole or bowl, thoroughly combine brown sugar, cornstarch and ginger. Stir in soya sauce, vinegar and pineapple juice.
4. Microwave, uncovered, on FULL POWER for 4 to 5 min or until mixture boils and thickens, stirring three times.
5. Stir in cooked meatballs, green pepper slices and pineapple chunks.
6. Microwave, covered, on FULL POWER for 5 to 6 min or until well-heated, stirring once or twice.
7. Let stand, covered, 5 min. Serve hot over rice. 4 servings.

STEP	YOUR TIME	COMMENTS
4		
6		

### MEATBALLS AND SPINACH SALAD

*A nutritious dish with an oriental flavor. Served over rice, it makes a complete meal.*

1 recipe Basic Meatballs

1 small green pepper, cut in strips

1 beef bouillon cube

125 mL sliced mushrooms

250 mL boiling water

250 mL sliced green onion

50 mL soya sauce

250 g spinach leaves (about 500 mL)

50 mL flour

125 mL cold water

1. Prepare meatballs according to basic recipe, or thaw frozen cooked meatballs as directed.
2. In a 1.5 L casserole dissolve bouillon cube in boiling water. Add soya sauce.
3. Add flour to cold water and stir until smooth. Add to bouillon.
4. Microwave on FULL POWER for 4 to 5 min, stirring at least once.
5. Add meatballs, green pepper, mushrooms and onion to the sauce. Stir well.
6. Microwave, covered, on FULL POWER for 3 to 4 min, stirring at least once.
7. Tear spinach into pieces, discarding stems. Add to casserole and toss lightly.
8. Microwave, covered, on FULL POWER for 1 min.
9. Let stand 5 min and serve over rice. 4 servings.

STEP	YOUR TIME	COMMENTS
4		
6		
8		

## CREATE-A-CASSEROLE

1. In a 2 L glass casserole crumble 500 g ground beef and add 1 medium onion, chopped.
2. Microwave, covered, on FULL POWER for 5 to 6 min, or until just a slight tinge of pink remains. Stir at least once halfway through the cooking time. Drain off excess fat.
3. Add 2 mL salt, 1 mL pepper and one ingredient from each column (except toppings) in the suggested quantity, and mix well.
4. Microwave, covered, on FULL POWER for 5 to 8 min or until hot. Rotate at least once.
5. Sprinkle casserole with your choice of topping. Cover and let stand 5 to 10 min before serving. 4 servings.

Cooked Rice Or Pasta 250 mL	Cooked Vegetables 250 mL	Liquid	Seasonings 2 mL	Toppings 125 mL
macaroni noodles spaghetti rice	celery green pepper peas green beans corn carrots mushrooms	1 can (398 mL) tomato sauce OR 1 can (284 mL) soup: mushroom, celery tomato PLUS 150 mL milk or water	thyme oregano basil marjoram parsley garlic	grated cheese croutons crushed potato chips crushed crackers

### \* TO INCREASE QUANTITY OF RECIPE:

increase cooking time 2 to 2.5 min for each 250 mL.

STEP	YOUR TIME	COMMENTS
2		
4		

## KITCHEN METRICS

### MEASURES

Use metric measures for metric recipes.

#### Mass

1 kg is slightly more than 2 pounds.  
750 g is about 1½ pounds

#### Temperatures

50°C replaces 120°F  
60°C replaces 140°F  
70°C replaces 160°F

#### Length

1 cm (10 mm) is slightly less than ½ inch  
8 cm is about 3 inches

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